

IN THE CLAIMS

Please enter the following amended claims.

C₁ 29. (Amended) An isolated and purified DNA molecule comprising a DNA segment comprising a transcriptional regulatory region of a plant 4-coumarate Co-enzyme A ligase gene, wherein the transcriptional regulatory region comprises at least SEQ ID NO:15.

C₂ 31. (Amended) The isolated and purified DNA molecule of claim 29 in which the DNA segment directs expression of a linked sequence in the xylem of a plant.

45. (Amended) An expression cassette comprising a transcriptional regulatory region of a lignin-specific 4-coumarate Co-enzyme A ligase gene operably linked to a DNA segment comprising an open reading frame.

C₃ 46. (Amended) A method of expressing a DNA segment in the xylem of a plant, comprising:

(a) introducing an expression cassette comprising a transcriptional regulatory region of a lignin-specific 4-coumarate Co-enzyme A ligase gene operably linked to a DNA segment into cells of a plant.

(b) regenerating the plant cells to provide a transgenic plant; and

(c) expressing the DNA segment in the xylem of a plant.

C₄ 54. (Amended) The isolated and purified DNA molecule of claim 31, wherein the linked sequence is the plant 4-coumarate Co-enzyme A ligase gene or another gene.

C₅ 60. (Amended) An expression cassette as set forth in claim 45, wherein the open reading frame comprises the 4-coumarate Co-enzyme A ligase gene or another gene.

C₆ 62. (Amended) An expression cassette as set forth in claim 45, wherein the transcriptional regulatory region directs the expression of a gene in a xylem of a plant.

63. (Amended) An expression cassette as set forth in claim 45, wherein the transcriptional regulatory region is a sequence as shown in SEQ ID NO: 5.

64. (Amended) An expression cassette as set forth in claim 45, wherein the transcriptional regulatory region includes at least one of:

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- a) a sequence as shown in SEQ ID NO: 5, wherein SEQ ID NO: 5 comprises SEQ ID NO:15, SEQ ID NO:16, and SEQ ID NO:17;
 - b) a sequence as shown in SEQ ID NO: 15, SEQ ID NO:16, and SEQ ID NO:17;
 - c) a sequence as shown in SEQ ID NO: 15;
 - d) a sequence as shown in SEQ ID NO: 15, and SEQ ID NO:16;
 - e) a sequence as shown in SEQ ID NO: 15, and SEQ ID NO:17;
 - f) a sequence as shown in SEQ ID NO:16, and SEQ ID NO:17; or
 - g) a plant sequence as shown in SEQ ID NO:17.

65. (Amended) An expression cassette as set forth in claim 45, wherein the transcriptional regulatory region comprises a sequence as shown in SEQ ID NO: 15.

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73. (Amended) A polynucleotide sequence as set forth in claim 71, wherein the promoter activity is lignin-specific.

75. (Amended) A polynucleotide sequence as set forth in claim 71, wherein SEQ ID NO: 5 comprises a cis-acting element; wherein the cis-acting element comprises SEQ ID NOs: 15-17.

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76. (Amended) A gene promoter, comprising:
a polynucleotide sequence as shown in SEQ ID NO: 5 such that when the gene promoter is operably linked with an open reading frame and is integrated into a plant genomic DNA, the gene promoter targets the expression of the open reading frame in the xylem.

Please cancel claims 56, 57, 59, 61, 67-70, 74, and 77.

Please enter the following newly added claims.

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78. (New) A polynucleotide comprising:

- a) a sequence as shown in SEQ ID NO: 5, wherein SEQ ID NO: 5 comprises SEQ ID NO:15, SEQ ID NO:16, and SEQ ID NO:17;

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- b) a sequence as shown in SEQ ID NO: 15, SEQ ID NO:16, and SEQ ID NO:17;
 - c) a sequence as shown in SEQ ID NO: 15;
 - d) a sequence as shown in SEQ ID NO: 15, and SEQ ID NO:16;
 - e) a sequence as shown in SEQ ID NO: 15, and SEQ ID NO:17;
 - f) a sequence as shown in SEQ ID NO:16, and SEQ ID NO:17; or
 - g) a plant sequence as shown in SEQ ID NO:17.

79. (New) A polynucleotide comprising a sequence as shown in SEQ ID NO: 5, wherein SEQ ID NO: 5 comprises SEQ ID NO:15, SEQ ID NO:16, and SEQ ID NO:17.

80. (New) A polynucleotide comprising a sequence as shown in SEQ ID NO: 15, SEQ ID NO:16, and SEQ ID NO:17.

81. (New) A polynucleotide comprising a sequence as shown in SEQ ID NO: 15.

82. (New) A polynucleotide comprising a sequence as shown in SEQ ID NO:15 and SEQ ID NO:16.

83. (New) A polynucleotide comprising a sequence as shown in SEQ ID NO: 15 and SEQ ID NO:17.

84. (New) A polynucleotide comprising a sequence as shown in SEQ ID NO: 16 and SEQ ID NO:17.

85. (New) A plant polynucleotide comprising a sequence as shown in SEQ ID NO:17.

86. (New) A gene promoter, comprising:

a polynucleotide sequence, wherein the sequence comprises SEQ ID NO: 15, SEQ ID NO:16, and SEQ ID NO:17; such that when the gene promoter is operably linked with an open reading frame and is integrated into a plant genomic DNA, the gene promoter targets the expression of the open reading frame in a xylem.

87. (New) A gene promoter, comprising:

a polynucleotide sequence, wherein the sequence comprises SEQ ID NO: 5; such that when the gene promoter is operably linked with an open reading frame and is integrated into a plant genomic DNA, the gene promoter targets the expression of the open reading frame in a xylem.

88. (New) A gene promoter, comprising:

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a polynucleotide sequence, wherein the sequence comprises SEQ ID NO: 15 and SEQ ID NO:16; such that when the gene promoter is operably linked with an open reading frame and is integrated into a plant genomic DNA, the gene promoter targets the expression of the open reading frame in a xylem.

89. (New) A gene promoter, comprising:

a polynucleotide sequence, wherein the sequence comprises SEQ ID NO: 15 and SEQ ID NO:17; such that when the gene promoter is operably linked with an open reading frame and is integrated into a plant genomic DNA, the gene promoter targets the expression of the open reading frame in a xylem.

90. (New) A gene promoter, comprising:

a polynucleotide sequence, wherein the sequence comprises SEQ ID NO: 16 and SEQ ID NO:17; such that when the gene promoter is operably linked with an open reading frame and is integrated into a plant genomic DNA, the gene promoter targets the expression of the open reading frame in a xylem.

91. (New) An isolated and purified DNA molecule comprising a DNA segment comprising a transcriptional regulatory region of a plant 4-coumarate Co-enzyme A ligase gene, wherein the transcriptional regulatory region is lignin-specific.

92. (New) The isolated and purified DNA molecule of claim 91, wherein the transcriptional regulatory region includes at least one of:

- a) a sequence as shown in SEQ ID NO: 5, wherein SEQ ID NO: 5 comprises SEQ ID NO:15, SEQ ID NO:16, and SEQ ID NO:17;
- b) a sequence as shown in SEQ ID NO: 15, SEQ ID NO:16, and SEQ ID NO:17;
- c) a sequence as shown in SEQ ID NO: 15;

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- d) a sequence as shown in SEQ ID NO: 15, and SEQ ID NO:16;
 - e) a sequence as shown in SEQ ID NO: 15, and SEQ ID NO:17;
 - f) a sequence as shown in SEQ ID NO:16, and SEQ ID NO:17; or
 - g) a plant sequence as shown in SEQ ID NO:17.

93. (New) The isolated and purified DNA molecule of claim 29 wherein the transcriptional regulatory region is tissue-specific.
